

**Amendment and Response Under 37 C.F.R. 1.116**

Applicant: Jeffrey W. Chambers

Serial No.: 10/064,498

Filing Date: July 22, 2002

Docket No.: C364.104.101

Title: CATHETER WITH FLEXIBLE TIP AND SHAPE RETENTION

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**IN THE CLAIMS**

Please cancel claims 16, 17, 25-30, 39, 45, and 46 as follows:

- 1.(Previously Presented) The guide catheter of claim 33, wherein:  
the curved shape of the distal tip defines a curvature of ninety degrees or greater; and  
the curved distal tip having  
a flexibility to permit straightening of the curved distal tip by advancing the  
guidewire therethrough; and  
shape retention memory to return to the original angle of curvature.
- 2.(Previously Presented) The catheter of claim 1, wherein the distal tip portion is more  
flexible than the intermediate section.
3. – 9.(Cancelled)
- 10.(Original) The catheter of claim 1, wherein an amount of curvature of the curved distal tip  
can be controlled by a variable stiffness guidewire.
- 11.(Previously Presented) The catheter of claim 1, wherein the distal tip is formed of fused  
nylon.
- 12.(Previously Presented) The catheter of claim 1, wherein the distal tip is formed of plastic.
- 13.(Previously Presented) The catheter of claim 1, wherein the distal tip is formed of  
polyurethane.

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14.(Previously Presented) The catheter of claim 1, wherein the distal tip includes a wire having shape memory characteristics.

15.(Previously Presented) The catheter of claim 1, wherein the proximal section includes a double braided metal member.

16. – 30.(Cancelled)

31.(Previously Presented) A catheter for use in combination with a variable stiffness guidewire, comprising:

a longitudinal axis, a proximal section and a distal section;

said distal section comprising a soft flexible pre-formed curved portion in its distal end

having a curvature of ninety degrees or greater and exhibiting varying flexibility along a length thereof and shape retention properties;

said catheter having

an inner wall that defines a lumen that runs along said longitudinal axis forming a single continuous tube, a reinforcement braid disposed over said inner wall, and

an outside covering disposed over said reinforcement braid;

said catheter proximal end further comprising a spacer disposed between said wall liner and said reinforcement braid; and

said reinforcement braid doubled over the proximately two-thirds of the catheter.

32.(Previously Presented) A catheter for use with a variable stiffness guidewire with a pre-formed curved distal tip, comprising:

a catheter generally flexible to conform to vascular areas of a body,

said catheter extending from a proximal end to a distal end;

said catheter having a lumen therein, the lumen sized to receive a guidewire therein;

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the distal tip rotatable to different orientations by rotations of the proximal end of the catheter; and

the distal tip having a pre-determined curvature in a natural state and characterized by a varying flexibility adapted to permit incremental bending of the distal tip by advancing the variable stiffness guidewire therethrough.

33.(Previously Presented) A guide catheter for steering a guidewire from a first body passage to a second, branched body passage having a diameter of not more than 4 mm, the guide catheter comprising:

a catheter body defining a lumen; and

a reinforcement braid extending along the catheter body;

wherein the catheter defines:

a proximal section,

an intermediate section extending from the proximal section and defining a longitudinal axis,

a distal section extending from the intermediate section and forming a distal tip having an outer diameter sized for deployment within a body passage having a diameter of not more than 4 mm and capable of maintaining a curved shape relative to the longitudinal axis;

and further wherein the distal tip is characterized by a varying flexibility along a length thereof such that in the curved shape, the distal tip is configured to steer a guide wire from a first body passage to a second, branched body passage extending at an angle from the first body passage.

34.(Previously Presented) The guide catheter of claim 1, wherein the catheter is configured to independently maintain the curved shape at the distal tip.

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35.(Previously Presented) The guide catheter of claim 33, wherein the catheter is configured such that a spatial orientation of the distal section, in the curved shape, can be altered by rotating the proximal section.

36.(Previously Presented) The guide catheter of claim 33, wherein the lumen at the distal section has a diameter appropriate for steering a guidewire having a diameter of approximately 0.014 inch.

37.(Previously Presented) The guide catheter of claim 33, wherein the lumen at the distal section has a diameter of approximately 0.017 inch.

38.(Previously Presented) The guide catheter of claim 33, wherein an outer diameter of the distal section is approximately 0.029 inch.

39.(Cancelled)

40.(Previously Presented) The catheter of claim 32, wherein the distal tip includes a first straight subsection extending from a distal-most end of the catheter and a pre-formed curved subsection extending immediately proximal from the first straight subsection, and further wherein a bending stiffness of the first straight subsection is different from a bending stiffness of the pre-formed curved subsection.

41.(Previously Presented) The catheter of claim 40, wherein the bending stiffness of the first straight subsection is greater than the bending stiffness of the pre-formed curved subsection.

42.(Previously Presented) The catheter of claim 40, wherein the distal tip further includes a second straight subsection extending immediately proximal from the pre-formed curved

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subsection, and further wherein a bending stiffness of the second straight subsection is different from the bending stiffness of the pre-formed curved subsection.

43.(Previously Presented) The catheter of claim 42, wherein the bending stiffness of the second straight subsection is greater than the bending stiffness of the pre-formed curved subsection.

44.(Previously Presented) The catheter of claim 43, wherein the bending stiffness of the first straight subsection is greater than the bending stiffness of the pre-formed curved subsection.

45.(Cancelled)

46.(Cancelled)